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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/286,119 04/02/99 GOFFI

I ITALO-ET-AL-

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IM62/1222

EXAMINER

LORENZO, J

ART UNIT

PAPER NUMBER

1734

DATE MAILED:

12/22/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/286,119

Applicant(s)

GOFFI ET AL.

Examiner

Jerry A. Lorengo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2000.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 6-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☐ received.
2. ☐ received in Application No. (Series Code / Serial Number) _____.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 14) ☐ Notice of References Cited (PTO-892)
- 15) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 16) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 17) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 18) ☐ Notice of Informal Patent Application (PTO-152)
- 19) ☐ Other: _____

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DETAILED ACTION

(1)

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 6, 10, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,314,814 to Deroode.

Regarding applicant claims 6 and 11, Deroode discloses a method and apparatus for the thermal sublimation transfer decoration of three-dimensional substrates comprising the steps of: (1) Providing a substrate 10 to be decorated onto a work bench means 30,31,32 (column 6, lines 8-34); (2) providing a sublimable color transfer support comprising a flexible and thermally deformable polymeric support skin 15 on which is carried a sublimable color pattern 16 (column 4, lines 31-65; column 5, lines 51-59); (3) contacting the sublimable color transfer support 15,16 against the substrate 10 held on, as per applicant claim 10, work bench means 30,31,32 within a vacuum chest means 20 and creating a vacuum between the substrate 10 and the sublimable color transfer support 15,16 by way of vacuum chest means 20 thereby forcing sublimable color transfer support 15,16 into intimate contact with the substrate 10 (column 5, lines 56-66; column 6, lines 3-37); (4) heating the sublimable color transfer support 15,16 and substrate 10 while under intimate vacuum contact by way of heating means 38 located above the work bench means 30,31,32 thereby causing said sublimable pattern to sublime, penetrate, and thereby decorate substrate 10 at a temperature of about 200 C for a period of about 30 seconds (column 4, lines 15-16; column 7, lines 4-36; column 7, line 40); and (5) after transfer and ceasing of the heat application, separating the decorated substrate 10 from the spent sublimable color transfer support 15,16 (column 7, lines 45-48).

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(2)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,314,814 to Deroode, as set forth in section (1), above, in view of U.S. Patent No. 4,411,667 to Meredith et al.

Although Deroode, in section (1), above, discloses a method and apparatus for the sublimation transfer decoration of a substrate by way of a heat and vacuum pressure, he does not specifically disclose, as per applicant claim 7, that the substrate to be decorated is preliminarily surface treated (cleaned, de-greased, etc.) or painted before it is advanced to the step of sublimation transfer.

However, the transfer sublimation printing of coated and cured metal substrates is known, as disclosed by Meredith et al. In his method, Meredith et al. teaches a method of continuous transfer printing wherein a continuous length of metal strip is coated with a thermosetting material e.g. an alkyd, polyester, polyurethane, or epoxy paint, and brought into contact after curing with a continuous strip of printed sublimation material (abstract). He also discloses that the paint may in turn be surfaced with a thermosetting lacquer, i.e., a transparent paint (column 1, lines 21-22).

Therefore, in the case of metal object to be decorated, for example, and especially by way of sublimation printing, it would have been obvious to one of ordinary skill in the art to pretreat a metal substrate by painting as well as by transparent protective over coating, prior to transfer decoration, as taught by Meredith et al. motivated by the fact that it is well known in the art that sublimation transfer printing requires a substrate which presents a surface into which the

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sublimation print may diffuse. This is especially true with respect to metal, glass, and ceramic substrates.

Furthermore, it would have also been obvious to one of ordinary skill in the art to pre-treat the surface of the substrate (such as by cleaning, de-greasing, abrading, oxidative coating, etc.) prior to the application of any paints or lacquers motivated by the fact that the skilled artisan would have appreciated the importance of supplying a substrate with a surface amenable to painting or coating, i.e., a surface free from dirt, grime, grease, or other surface defects which would decrease the effectiveness of coating or paints applied thereto.

(3)

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,314,814 to Deroode, as set forth in section (1), above, or, in the alternative, over the references as combined in section (4), above.

Although Deroode, as set forth in sections (1) and (2), above, discloses a method for the sublimation transfer decoration of a substrate by way of a heat and vacuum pressure, he does not specifically disclose, as per applicant claim 9, that the artifact is vacuum wrapped and heated in a preliminary step prior to transfer in order to achieve thermoforming of the sublimable color transfer support against the substrate to be decorated.

Deroode, however, does disclose that the sublimable color transfer support is preheated prior to its vacuum placement against the substrate followed by intimate contact by the application of vacuum pressure followed by continued heating in order to bring about complete sublimation transfer of the decoration from the sublimable color transfer support to the substrate (column 7, lines 1-39). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to supply a separate and preliminary heating and vacuum wrapping step prior to the actual heat and vacuum transfer motivated by the fact that the preliminary heating of the sublimable color transfer support would render it more flexible (as it is a thermoplastic) thus ensuring intimate contact between it and the substrate to be decorated and thereby increase the effectiveness of the sublimation transfer itself.

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(4)

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,314,814 to Deroode, as set forth in section (1), above, or, in the alternative, over the references as combined in section (2), above, in further view of U.S. Patent No. 4,923,847 to Ito et al.

Deroode, as set forth in sections (1) and (2), above, discloses a method for the sublimation transfer decoration of a substrate by way of a heat and vacuum pressure. Although he discloses that the support film 15 making up the sublimable color transfer support may be comprised of materials such as polypropylene, polyester, silicone, and polycarbonic materials such as PTFE (column 4, lines 18-20), he does not specifically disclose, as per applicant claim 8, that the support material 15 is composed of polyvinyl alcohol.

Ito et al., however, also drawn to thermal sublimation transfer methods, discloses a sublimable color transfer support which comprises support or base film 1 on which is carried a sublimable transfer dye. Ito et al. discloses that the base film 1 may comprise papers or films such as condenser paper, aramide film, polyester film, polystyrene film, polysulfone film, polyimide film, *polyvinyl alcohol film* (emphasis added), and cellulose films (column 4, lines 65-68; column 5, line 1; Figure 1).

Therefore, it would have been obvious to one of ordinary skill in the art to utilize a polyvinyl alcohol film, as taught by Ito et al. in place of the films (polyester, etc.) disclosed by Deroode motivated by the fact that Ito et al. discloses that polyvinyl alcohol films are known for use as supports for sublimation transfer films and furthermore by the fact that Deroode discloses that it is self-evident that other materials besides those disclosed by him may be used (column 4, lines 21-23).

(5)

Response to Amendments and Arguments

In response to the amendments filed October 10, 2000, newly added claims 6-11 have been rejected under the grounds of rejection as set forth in sections (1) to (4), above. Applicant's arguments have been fully considered but they are not persuasive.

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The applicant's arguments center upon two allegations: (1) That unlike the instant invention, Deroode teaches the decoration of only one side of a substrate; and (2) that the disclosure of the secondary reference Ito et al. teaches away from the methodology of the instant invention.

With regards to the applicant's first argument, the examiner respectfully submits that even if Deroode teaches only the decoration of one side of a substrate (which he does not as Figure 7 shows both top and side surfaces of article 10 being transfer decorated), the applicant should note that the instant invention as claimed also fails to disclose that more than "one side of the substrate" is transfer decorated. The examiner submits that although the applicant utilizes the word "wrapping", the examiner also notes that the applicant discloses on page 6, lines 1-10 of the specification that the transfer sheet may take the form of a sheet, strip, bag, or envelope. Thus, "wrapping up by tightly covering" could comprise, such as taught by Deroode, the laying and vacuum pulling of a transfer support in the form of a sheet over the three-dimensional substrate. If the applicant means to claim that the article or artifact is to be entirely enclosed on all surfaces by the transfer support then the applicant should claim the transfer support in the form of a bag or envelope as disclosed in his specification. The claims as currently written, however, read upon the teachings of Deroode and are properly rejected thereby as set forth in sections (1) to (4), above

The applicant's second main argument contends that the reference to Ito et al. teaches away from the instant invention since Ito et al. discloses, at column 7, lines 9-14 that the sticking of the transfer support is not desirable. The examiner respectfully submits that the applicant has apparently misinterpreted the teachings of Ito et al. in support of his argument. The examiner heartily agrees that Ito et al. teaches that "sticking" of the transfer support is not desirable. This is to be expected by one of ordinary skill in the art. In all transfer processes, the main goal is to utilize a transfer support which can release a coating or element to a substrate while remaining sustainable in its own right. Ito et al. is speaking to the desirability that the transfer support not bond to the surface of the article. If, during transfer, the transfer support were to bond or stick to the substrate being decorated, remnants of the transfer support could be left on the article

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resulting in an article surface exhibiting marring, marking, and a generally undesirable and unclean surface. The examiner respectfully submits that the Ito et al. reference was properly combined with Deroode to teach that obvious use of a PVA transfer support in a heated vacuum transfer method and apparatus.

(6)

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

(7)

Applicant is encouraged to **FAX After Final Amendments** (37 CFR 1.116) to expedite delivery to the Examiner. The Group 1734 Facsimile number is **(703) 305-3599**. A duplicate mailed copy of the facsimile transmission is **not required** and will only serve to delay the processing of your application.

If the applicant prefers to mail in After Final correspondence it is highly recommended that such be mailed to **BOX AF** which will also facilitate processing from the mailroom and within Group 1700.

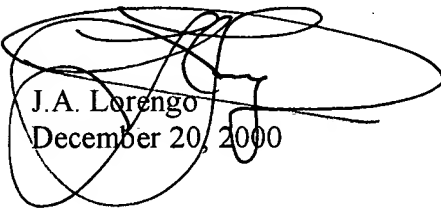
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(8)


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry A. Lorengo whose telephone number is (703) 306-9172. The examiner can normally be reached on Monday through Friday, 8:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (703) 308-3853. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7115 for regular communications and (703) 305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



J.A. Lorengo
December 20, 2000



RICHARD CRISPINO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700